

S.C.

Notice of Allowability

Application No.

10/771,761

Examiner

Sean E. Vincent

Applicant(s)

PITBLADDO, RICHARD B.

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to telephone interview of December 8, 2004.
2. ☒ The allowed claim(s) is/are 1-46 and 101-113.
3. ☒ The drawings filed on 04 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Meghan Van Leeuwen on December 8, 2004.

The application has been amended as follows:

3. The title has been changed to "Overflow downdraw glass forming method and apparatus".
4. Claims 47-100 have been canceled without prejudice or disclaimer from a later filing of the same claims in a divisional application.
5. Claim 1 has been amended as follows:

1. (Currently Amended) An improved apparatus for forming sheet glass, wherein the apparatus includes an inflow pipe for delivering molten glass, a trough for receiving molten glass that has sides attached to a wedged shaped sheet forming structure that has downwardly sloping sides converging at the bottom of the wedge such that a glass sheet is formed when molten glass flows over the sides of the trough, down the downwardly sloping sides of the wedged shaped sheet forming structure and meets at the bottom of wedge, and wherein the improvement comprises:

a downcomer pipe inserted vertically downward into an end of the inflow pipe opposite the trough, wherein a bottom of the downcomer pipe comprises at least one downward extension including one or more V-shaped or curved extensions, which produces a controlled vortex flow of at least a portion of a glass stream exiting the downcomer pipe, directing at least a portion of the glass stream into a specific location.

6. Claim 18 has been amended as follows:

18. (Currently Amended) A method for manufacturing glass sheets using an apparatus that includes a trough for receiving molten glass that has sides attached to a wedged shaped sheet forming structure that has downwardly sloping sides converging at the bottom of the wedge such that a glass sheet is formed when molten glass flows over the sides of the trough, down the downwardly sloping sides of the wedged shaped sheet forming structure and meets at the bottom of wedge, wherein the method comprises the step of:

altering a flow path of at least a portion of a molten glass stream, wherein a bottom of a downcomer pipe comprises at least one downward extension including one or more V-shaped or curved extensions, which produces a controlled vortex flow of at least a portion of the glass stream exiting the

downcomer pipe, directing at least a portion of the glass stream into a specific location.

7. The following is an examiner's statement of reasons for allowance: The prior art does not teach or fairly suggest apparatus for forming sheet glass as claimed having any of the following features:

- a. The bottom of a downcomer pipe comprising one or more V-shaped or curved extensions as claimed
- b. A bead guide as claimed
- c. The downcomer pipe not centered with the centerline of the inflow pipe as claimed
- d. The bottom of a downcomer pipe cut at an angle to the centerline of the downcomer pipe as claimed
- e. An inlet end glass seal structure designed as claimed.

8. The prior art does not teach or fairly suggest methods for manufacturing glass sheets as claimed including one of the following features:

- f. The bottom of a downcomer pipe comprising one or more V-shaped or curved extensions as claimed
- g. Moving the inflow pipe relative to the downcomer pipe such that the pipes are off center as claimed.

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9. It would not have been obvious to incorporate the above features into the apparatus and methods of the prior art.

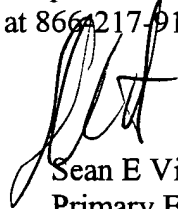
10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

11. The information disclosure statements from the parent file 10/214,904 have been considered and the reference listings transferred from the parent file into this file.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Vincent whose telephone number is (571) 272-1194. The examiner can normally be reached on M - F (8:30 - 6:00).

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sean E Vincent
Primary Examiner
Art Unit 1731

S Vincent
Wednesday, December 08, 2004